

## AMENDMENTS TO THE CLAIMS

1. **(Cancelled)**
2. **(Previously presented)** The solid reagent of claim 35 wherein the organic polymer base is in the form of a fiber, a woven or nonwoven fabric consisting of an assembly of fibers, a porous membrane or a hollow fiber membrane.
3. **(Previously presented)** The solid reagent of claim 35 wherein the graft polymer side chain is introduced via a radiation-induced graft polymerization.
4. **(Previously presented)** The solid reagent of claim 35 wherein the reactive functional group serves as a reagent for any one of oxidation reaction, reduction reaction, halogenation reaction or nucleophilic replacement reaction.
5. **(Cancelled)**
6. **(Currently amended)** A process for preparing a solid reagent of claim 35, comprising:
  - graft-polymerizing chloromethylstyrene onto the backbone of an organic polymer base to form a graft polymer side chain;
  - introducing a quaternary ammonia-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group;
  - and
  - ~~converting~~ contacting the graft polymer side chain having the quaternary ammonia-type anion exchange group on the graft polymer side chain into with a solution containing a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion to convert a counter anion attached to the anion exchange group into the reactive functional group.



7-11. **(Cancelled)**

12. **(Previously presented)** The solid reagent of claim 2 wherein the graft polymer side chain is introduced via a radiation-induced graft polymerization.

13. **(Previously presented)** The solid reagent of claim 2 wherein the reactive functional group serves as a reagent for any one of oxidation reaction, reduction reaction, halogenation reaction or nucleophilic replacement reaction.

14. **(Previously presented)** The solid reagent of claim 3 wherein the reactive functional group serves as a reagent for any one of oxidation reaction, reduction reaction, halogenation reaction or nucleophilic replacement reaction.

15-17. **(Cancelled)**

18. **(Currently amended)** A process for preparing a solid reagent of claim 2, comprising:

graft-polymerizing chloromethylstyrene onto the backbone of an organic polymer base to form a graft polymer side chain;

introducing a quaternary ammonia-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group; and

~~converting~~ contacting the graft polymer side chain having the quaternary ammonia-type anion exchange group on the graft polymer side chain into with a solution containing a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion to convert a counter anion attached to the anion exchange group into the reactive functional group.



19. **(Currently amended)** A process for preparing a solid reagent of claim 3, comprising:

graft-polymerizing chloromethylstyrene onto the backbone of an organic polymer base to form a graft polymer side chain;

introducing a quaternary ammonia-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group; and

~~converting~~ contacting the graft polymer side chain having the quaternary ammonia-type anion exchange group on the graft polymer side chain into with a solution containing a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion to convert a counter anion attached to the anion exchange group into the reactive functional group.

20. **(Currently amended)** A process for preparing a solid reagent of claim 4, comprising:

graft-polymerizing chloromethylstyrene onto the backbone of an organic polymer base to form a graft polymer side chain;

introducing a quaternary ammonia-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group; and

~~converting~~ contacting the graft polymer side chain having the quaternary ammonia-type anion exchange group on the graft polymer side chain into with a solution containing a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion to convert a counter anion attached to the anion exchange group into the reactive functional group.

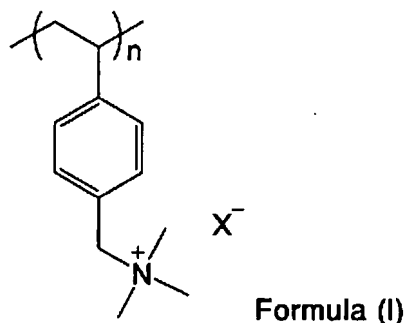


21. **(Previously presented)** The process of claim 6 wherein the graft polymerization is conducted via a radiation-induced graft polymerization.

22-34. **(Cancelled)**

35. **(Previously presented)** A solid reagent comprising an organic polymer base in which a graft polymer side chain is introduced onto the backbone of the organic polymer base,

wherein the graft polymer side chain has a formula (I):



wherein,

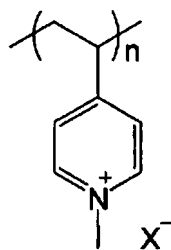
n is an integral equal to two or more,

X is a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrate ion.

36. **(Previously presented)** A solid reagent comprising an organic polymer base in which a graft polymer side chain is introduced onto the backbone of the organic polymer base,

wherein the graft polymer side chain has a formula (II):





Formula (II)

wherein,

n is an integral equal to two or more,

X is a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion.

37. **(Previously presented)** The solid reagent of claim 36 wherein the organic polymer base is in the form of a fiber, a woven or nonwoven fabric consisting of an assembly of fibers, a porous membrane or a hollow fiber membrane.

38. **(Previously presented)** The solid reagent of claim 36 wherein the graft polymer side chain is introduced via a radiation-induced graft polymerization.

39. **(Previously presented)** The solid reagent of claim 36 wherein the reactive functional group serves as a reagent for any one of oxidation reaction, reduction reaction, halogenation reaction or nucleophilic replacement reaction.

40. **(Currently amended)** A process for preparing a solid reagent of claim 36, comprising:

graft-polymerizing 4-vinylpyridine onto the backbone of an organic polymer base to form a graft polymer side chain;

introducing a quaternary pyridinium-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group:  
and



~~converting~~ ~~contacting the graft polymer side chain having the quaternary pyridinium-type anion exchange group on the graft polymer side chain into with a solution containing~~ a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion to convert a counter anion attached to the anion exchange group into the reactive functional group.

41. **(Previously presented)** The solid reagent of claim 37 wherein the graft polymer side chain is introduced via a radiation-induced graft polymerization.

42. **(Previously presented)** The solid reagent of claim 37 wherein the reactive functional group serves as a reagent for any one of oxidation reaction, reduction reaction, halogenation reaction or nucleophilic replacement reaction.

43. **(Previously presented)** The solid reagent of claim 38 wherein the reactive functional group serves as a reagent for any one of oxidation reaction, reduction reaction, halogenation reaction or nucleophilic replacement reaction.

44. **(Currently amended)** A process for preparing a solid reagent of claim 37, comprising:

graft-polymerizing 4-vinylpyridine onto the backbone of an organic polymer base to form a graft polymer side chain;

introducing a quaternary pyridinium-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group; and

~~converting~~ ~~contacting the graft polymer side chain having the quaternary pyridinium-type anion exchange group on the graft polymer side chain into with a solution containing~~ a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion,



thiocyanate ion, azide ion and nitrite ion to convert a counter anion attached to the anion exchange group into the reactive functional group.

45. **(Currently amended)** A process for preparing a solid reagent of claim 38, comprising:

graft-polymerizing 4-vinylpyridine onto the backbone of an organic polymer base to form a graft polymer side chain;

introducing a quaternary pyridinium-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group; and

~~converting~~ contacting the graft polymer side chain having the quaternary pyridinium-type anion exchange group on the graft polymer side chain into with a solution containing a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion to convert a counter anion attached to the anion exchange group into the reactive functional group.

46. **(Currently amended)** A process for preparing a solid reagent of claim 39, comprising:

graft-polymerizing 4-vinylpyridine onto the backbone of an organic polymer base to form a graft polymer side chain;

introducing a quaternary pyridinium-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group; and

~~converting~~ contacting the graft polymer side chain having the quaternary pyridinium-type anion exchange group on the graft polymer side chain into with a solution containing a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion,



thiocyanate ion, azide ion and nitrite ion to convert a counter anion attached to the anion exchange group into the reactive functional group.

47. **(Previously presented)** The process of claim 40 wherein the graft polymerization is conducted via a radiation-induced graft polymerization.